

REMARKS

Favorable reconsideration of this application, in view of the following comments and as presently amended, is respectfully requested.

The specification has been amended by the present response to correct for minor grammatical and idiomatic informalities. The changes made to the specification are deemed to be self-evident from the originally filed disclosure, and thus are not deemed to raise any issues of new matter.

The abstract has been amended by the present response to be in more proper format under United States Practice.

Claims 1-30 are pending in this application. Claims 1-5, 12, 14-16, 18-24, and 29-30 were rejected under 35 U.S.C. §103(a) as unpatentable over Yoshimura et al, U.S. patent 6,019,461. Claims 6-13, 17, and 25-28 were noted as allowable if rewritten to include all the limitations of their base claim and any intervening claims.

Initially, applicant gratefully acknowledges the indication of the allowable subject matter of Claims 6-13, 17, and 25-28.

Addressing now the rejection of Claims 1-5, 12, 14-16, 18-24, and 29-30 under 35 U.S.C. §103(a) as unpatentable over Yoshimura et al, that rejection is traversed by the present response.

Independent Claim 1 positively recites that information of a cartridge is written into a rewritable non-volatile memory at a certain frequency, and that information is written into a rewritable storage device at a specified frequency that is higher than the certain frequency. Independent Claims 18 and 19 recite a similar limitation. Those features in the present invention are neither taught nor suggested by Yoshimura et al. In fact, the basis for the outstanding rejection appears to recognize that Yoshimura et al does not disclose such

features. Specifically, the outstanding rejection states:

Yoshimura et al. disclose the claimed invention except for 'an information writing unit that writes specific information into said rewritable storage device of said printer main body at a specified frequency that is higher than the certain frequency', since it is seen as a design expedient for an engineer having ordinary skill in the art at the time the invention was made to select a change in the frequency for the purpose of restricting the allowable frequency of rewriting.¹

First, it is noted that the basis for the outstanding rejection is unclear. That is, and as recognized above, Yoshimura et al does not disclose the above-noted features in the present invention. What has not been stated in the basis for the outstanding rejection is why one of ordinary skill in the art would modify the teachings of Yoshimura et al to meet such claim limitations. Further, the basis for the outstanding rejection provides no indication as to why such a modification would be a "design expedient" as the goal of "restricting the allowable frequency of rewriting" does not appear to have any benefits.

The applicant of the present invention has recognized that in a printer as recited in the pending claims benefits can be achieved by the specific timing utilized for writing data into a rewritable non-volatile memory and into a rewritable storage device.

As is discussed in the present specification, the claimed arrangement favorably restricts a writing frequency into a storage element, to thereby enable the storage unit to have a relatively low allowable frequency to reduce manufacturing costs of the ink cartridge.² Such a benefit in the present invention is clearly neither taught nor suggested nor even addressed by Yoshimura et al.

Moreover, the positively recited features in the pending claims are actually contrary to standard thinking in the art.

¹Office Action of May 30, 2000, page 4, last paragraph.

²See the present specification at page 43, lines 1-7, as one example.



As noted above, one feature in the present invention is that an information writing unit writes specific information into a memory of a printer main body at a specified frequency that is higher than a certain frequency at which a memory writing unit writes information into the memory of an ink cartridge. One of ordinary skill in the art would typically consider such a specified frequency and a certain frequency to be the same. That is the case because in a printer a power supply could be stopped at any moment, for example if a power failure suddenly occurred or if a user accidentally pulled the plug of the printer out of the socket. In that case one of ordinary skill in the art would typically want the same information to always be stored in both the memory of the main body and the memory of the cartridge. That is, in order to maintain the same information in both of such memories conventional thinking is to utilize a same frequency for writing data into both memories.

The present invention, contrary to conventional thinking, intentionally sets the writing frequency of a cartridge memory to be less than that of a main body memory; in the present invention information is written into the main body memory at a frequency higher than the frequency at which information is written into the cartridge memory.

Such a feature in the present invention provides benefits recognized by the applicant of the present invention and not recognized in any cited art. Moreover, such a feature in the present invention is not even addressed by the teachings in Yoshimura et al.

In such ways, such a feature in the present invention as noted above patentably distinguishes the pending claims over the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to Issue.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Registration No. 25,599
Attorney of Record
Surinder Sachar
Registration No. 34,423



22850

(703) 413-3000
Fax #: (703)413-2220
GJM:SNS/cct

I:\atty\SNS\49470090-am.wpd

